

What is claimed is:

1 1. A radio receiver comprising

2
3 first and second antennas connected to RF processing circuitry by an RF switch;

4
5 an RF switch control switched incrementally in response to a sequence of scheduled
6 packet bursts.

1 2. The radio receiver of claim 1, wherein:

2 the RF switch control schedules sequence bursts prescribed by a QoS defined by a MAC
3 protocol.

1 3. The radio receiver of claim 2, wherein:

2 a MAC processor is synchronized with transmission of a base station.

1 4. The radio receiver of claim 1, wherein:

2 the antennas are switched so that each antenna receives a related packet burst.

1 5. A method of maintaining a controlled QoS in a wireless communication system,
2 comprising steps of:

3 receiving communications from a transceiver at a transmission station by wireless
4 transceivers at receiving stations having switched protocol diversity reception operational modes;

5 communications being formatted as multiple packet bursts;

6 enabling a first antenna to receive a first packet burst;

7 enabling a second antenna to receive a second packet burst;

8 recording the received bursts as soft information in a storage medium;

9 combining the soft information from the first and second bursts into a single message.

1 6. The method of claim 5 wherein:

2 each packet burst contains a same complete message.

1 7. The method of claim 5 wherein:

2 each packet burst contains a portion of a space-time coded message spread across the first
3 and second packet bursts.

1 8. A method of achieving a QoS control in a wireless LAN communication system,
2 comprising steps of:

3 transmitting a message contained within a plurality of packet bursts occurring at spaced
4 time intervals;

5 receiving the packet burst individually at a plurality of antennas.

1 9. The method of claim 8 wherein;

2
3 each of the plurality of the antennas is connected to a radio receiver at separate times
4 relative to other receiving antennas.

1 10. The method of claim 8, wherein:

2 including a complete message within each packet burst.

1 11. The method of claim 8 wherein:

2 a message is spread across the plurality of packet bursts by space-time coding.

1 12. The method of claim 8 wherein:

2 the process of signal transmitting combines a protocol with signal processing.

1 13. A communication system for coupling a transmitter and a receiver adapted for
2 receiving at least first and second signal bursts by first and second antennas respectively, and
3 responding to the two signal bursts to communicate a single unified message at the receiver;
4 whereby:

5 the first and second signal bursts are sequentially separated in time;

6 the first and second antennas are sequentially enabled to communicate to storage at the
7 receiver;

8 enabling a representation of the unified message by responding to the first and second
9 signals.

1 14. The communication system of claim 13, wherein:

2 the first and second signal bursts are identical packets of a common message.

1 15. The communication system of claim 13, wherein:

2 the first and second signal bursts are each a part of a space-time coded message spread
3 across two bursts; and

4 a common message is derived from the sequential signal bursts received by the first and
5 second antennas.

1 16. The communication system of claim 13, wherein:

2 enabling includes retaining the first and second signal bursts in a storage medium and
3 processing to deliver the single unified message.

1 17. The communication system of claim 13, wherein:

2 deriving the common message includes selecting a message from one of the receiving
3 antennas.

1 18. The communication system of claim 13, wherein:

2 deriving the common message includes decoding a space-time coded signal spread across
3 and received by both the first and second antennas.

1 19. The method of claim 8, including a further step of:

2 notifying a transmitter at a transmitting end by a receiving end of the number of antennas
3 and radio receivers at the receiving end.

1 20. The method of claim 8, including a further step of:

2 a receiver notifying a transmitter that it accepts and responds to protocol-assisted
3 diversity operations.

- 1 21. The method of claim 8, including a further step of:
- 2 upon reconstruction of a received message sending a message to the transmitting end to
- 3 cease further message bursts.